

in these  $\frac{1}{2}$  waveplates 43, 44 permit unoccluded passage of the unaffected upper or lower beam pair. The last waveplate in the second combination is another  $\frac{3}{4}$  waveplate 45 to return the beams from circular to linear polarization, with the fast axis at a relative angle of  $90^\circ$  to the first  $\frac{3}{4}$  waveplate 42. The four beams, two left ordinary (o) and two right extraordinary (e) beams are thereafter combined by a polarization beam splitter 56 into upper and lower left beams having both e1 and o2 components, as shown in the polarization diagram at this point in Fig. 3. It should be noted that the angle of the fast axis of the first  $\frac{3}{4}$  waveplate 42 can be plus  $45^\circ$  or minus  $45^\circ$  relative to the vertical direction, and that the second  $\frac{3}{4}$  waveplate 45 is oriented at an angle of like amplitude and opposite sign. - -

-- [0080] The tunable, chromatic dispersion compensator is based on cascading two suitably configured interleavers in series. The group delay of an interleaver can be either quadratic up or quadratic down, depending on whether the ordinary or extraordinary polarization is used as the input to the filtering stages, or depending on the relative phases between the individual time delay stages. The approximately quadratic group delay produces an approximately linear dispersion characteristic within the channel passband. Two cascaded interleavers may thus be arranged to cancel out the dispersion slope and provide a constant dispersion, as shown schematically in Fig. 14. The amount of dispersion can be tuned by introducing a wavelength shift at the first interleaver relative to the second interleaver. The shift can be produced by tuning the absolute frequency of the interleaver. The passband must be sufficiently low loss within the desired tuning range. For example, a pair of modified 50 GHz interleavers will enable a fixed amount of dispersion to be produced at all channels on a 100 GHz grid passing through the interleaver. This implementation has the advantage that only a single tunable chromatic dispersion compensator is required for a multitude of WDM channels. This approach also has the advantage of simultaneously reducing interchannel crosstalk. - -

In the Claims:

Please rewrite claims 42, 68-70, 98, 99, 102, 107, 109 and 113 as follows: